

trunk, small crown of moderately small, curved, and forked branches, and relatively dense foliage as compared with that of both longleaf, and particularly, loblolly in its form of development over the southern coastal plain; the characteristic orange brown longitudinal bark plates are also well marked in the older trees. The region, it would seem, affords an excellent opportunity for someone to look for a farther extension of the western limit of this interesting and very valuable commercial yellow pine.

FOREST SERVICE, WASHINGTON, D.C.

REVIEWS

Gager's *Fundamentals of Botany and Laboratory Guide**

These two books represent an unusually comprehensive and serious attempt to present the study of plant life so that college students may secure a good perspective of botanical science as a whole. Furthermore both books show clearly that the author sees no place for college botany which is not founded upon extensive and intensive first-hand study of plants. The intent is not to have students merely read interesting text materials *about* plants, but text and manual are both so organized as to be useful only in connection with constant study of plants themselves.

In the organization of the text, presentation of functions of plants precede presentation of any large amount of structure, an order of presentation which has found place in the practices of the best teachers of college botany, and an order which is essential if the student is to know "what it is all about." The text's general consideration of plant functions (pages 21-143) gives significance to the life-history studies (pages 144-445). Classification of seed-bearing plants (pages 446-501) presents the modern conceptions of the relationships of the leading divisions of the angiosperms, and the rest of the text (pages 502-620) deals with such specially important topics as "Evolution," "Darwinism," "Experimental Evolution," "Heredity," "Paleobotany," etc.

* Gager, C. Stuart, *Fundamentals of Botany*, 8 vo, pages xix+640; figures 434. *A Laboratory Guide for General Botany*, 8 vo, pages viii+191; both books published by P. Blakiston's Son and Company, Philadelphia, 1916.

As illustration of the quality of the books two important features of illustrations of the text may be cited. First, the photographs, in the main, represent common botanical situations which are of such kinds that the student, in his own studies, may discover similar illustrations and understand and appreciate them. The legends accompanying these photographs give evidence that the illustrations are not merely "enlivening pictures," but are organic parts of the presentation of the subject. For example, figure 60, which shows a young potato tuber developed as a branch from a sprout of an old seed-tuber, has eight lines of illuminating discussion composing the legend. This is very different from the usually observed legend, such as, "A Potato Tuber," which leaves one who really needs illustrations in a quite helpless condition. Such excellent legends are found throughout the text.

Secondly, a surprisingly large number of surprisingly fine diagrams of processes, life histories, family relationships, and evolutionary stories, serve not only to clarify confusing details, but serve also as splendid summaries of the topics under discussion.

Both the text and laboratory guide, while decidedly comprehensive and intensive, are of such splendid quality as to make them distinct contributions to the perplexing problems of college botanical instruction.

OTIS W. CALDWELL

NEWS ITEMS

In the more wide-spread fame of his later achievements, it is sometimes forgotten that the late Major-General Frederick Funston was for a brief period of his earlier career a botanical collector. In 1891, he accompanied Mr. F. V. Coville on a well-known botanical expedition to Death Valley in California. In 1893 and 1894, he made collections of plants in Alaska as special agent of the U. S. Dept. of Agriculture.

On Wednesday, March 14, the nearly completed building of the Brooklyn Botanic Garden was occupied for the first time, and within the next few days the library, herbarium, and offices